



U.S. DEPARTMENT OF COMMERCE
MAURICE H. STANS, Secretary
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
ROBERT M. WHITE, Administrator
ENVIRONMENTAL DATA SERVICE
WOODROW C. JACOBS, Director

LOCAL CLIMATOLOGICAL DATA

ANNUAL SUMMARY WITH COMPARATIVE DATA

1969

DAYTONA BEACH, FLORIDA

NARRATIVE CLIMATOLOGICAL SUMMARY

Daytona Beach is located on the Atlantic Ocean, with the Halifax River, part of Florida's Inland Waterway, running through the City. Terrain in the area is flat, soil is mostly sandy, and elevations in the area range from 3 to 15 feet above m.s.l. near the ocean to near 31 feet at the airport and along a ridge running along the western city limits.

Nearness to the ocean results in a climate tempered by the effect of land and sea breezes. In the summer, while maximum temperatures reach 90° or above during the late morning or early afternoon, the number of hours of 90° or above is relatively small due to the beginning of the sea breeze near midday and the occurrence of local afternoon convective thundershowers which lower the temperature to the comfortable eighties. Winters, although subject to invasions of cold air, are relatively mild due to the nearness of the ocean and latitudinal location.

The "rainy season" from June through mid-October produces 60 percent of the annual rainfall. The major portion of the summer rainfall occurs in the form of local convective thundershowers. These showers are occasionally heavy and produce as much as 2 or 3 inches of rain. The more severe showers may be attended by strong gusty

winds. Almost all rainfall during the winter months is associated with frontal passages.

Long periods of cloudiness and rain are infrequent, usually not lasting over 2 or 3 days. These periods are usually associated with a stationary front with waves, a so-called "northeaster", or a tropical disturbance.

Tropical disturbances or hurricanes are not considered a great threat to this area of the state. While not outside the hurricane belt, past history indicates the chance of having hurricane force winds in any given year to be about 1 in 30. Generally hurricanes in this latitude tend to pass well offshore or lose much of their intensity while crossing the state before reaching this area. Only in gusts have hurricane force winds ever been recorded at this station.

Heavy fog occurs mostly during the winter and early spring. These fogs usually form by radiational cooling at night and dissipate soon after sunrise. On rare occasions sea fog moves in from the ocean and persists for two or three days.

There is no significant source in the area for air pollution.

METEOROLOGICAL DATA FOR THE CURRENT YEAR

Station: DAYTONA BEACH, FLORIDA			MUNICIPAL AIRPORT			Standard time used: EASTERN			Latitude: 29° 11' N			Longitude: 81° 03' W			Elevation (ground): 31 feet			Year: 1969																			
Month	Temperature					(Base 65°)	Degree days				Precipitation			Relative humidity			Wind &				Number of days																
	Averages			Extremes			Total	Greatest in	Snow, ice pellets			Total	Greatest in	Resultant		Fastest mile		Sunrise to sunset		Temperatures																	
	Daily maximum	Daily minimum	Monthly	Highest	Lowest		Heating	Cooling	Total	24 hrs.	Date	Total	24 hrs.	01	07	13	19	Average speed	Percent of possible sunrise to sunset	Clear	Precipitation	Maximum	Minimum	Average daily solar radiation - langley's													
JAN	67.1	48.8	58.0	78	24+	35	2	216	7	1.53	0.63	4	0.0	0.0	77	81	60	73	36	3.2	12+	3	13	15	1	0											
FEB	65.3	45.0	55.2	80	2	32	5	273	4	2.03	1.13	8	0.0	0.0	73	76	51	65	32	2.9	35	26	10	13	15	1	0										
MAR	67.4	48.4	57.9	81	25+	36	12	228	17	2.74	0.80	15-16	0.0	0.0	74	75	52	65	32	1.8	28	25	6	8	17	1	1										
APR	80.1	60.8	70.5	91	18	50	26	2	173	0.12	0.05	19	0.0	0.0	77	82	52	66	10	4.1	9.7	23	23	11	13	15	1	1									
MAY	81.7	67.0	74.4	88	31	53	11	0	300	6.47	1.98	14	0.0	0.0	80	80	58	70	08	6.2	10.9	9	20	24	11	13	15	1	1								
JUN	88.2	72.8	80.5	93	22+	66	6	0	473	2.47	2.15	5	0.0	0.0	89	87	64	75	09	4.3	8.1	23	28	5	14	16	1	1									
JUL	92.1	73.5	82.8	97	8	70	3	0	559	2.61	0.75	30	0.0	0.0	84	84	59	72	18	2.1	7.1	26	24	23	17	18	1	1									
AUG	88.0	72.7	80.4	94	10	68	27	0	483	9.40	4.13	22-23	0.0	0.0	90	90	68	79	12	2.0	7.0	23	26	15	15	16	1	1									
SEP	85.9	73.4	79.7	92	10	70	26	0	447	8.89	4.02	21	0.0	0.0	87	89	69	80	07	3.5	7.3	23	10	29	1	21	18	1	1								
DCT†	82.9	71.2	77.1	87	21+	66	14+	0	383	6.97	2.14	26-27	0.0	0.0	81	82	67	79	07	6.6	9.4	29	11	1	7.3	18	1	1									
NDV	72.6	54.3	63.5	83	1	35	15	105	66	1.96	0.65	13-14	0.0	0.0	78	81	55	71	33	2.6	7.7	24	02	20	5.7	16	1	1									
DEC	67.0	43.9	56.5	78	30+	36	284	272	13	5.03	4.01	9-10	0.0	0.0	79	81	51	69	27	3.2	8.0	23	19	30+	3.9	18	1	1									
YEAR	78.2	61.2	69.7	97	JUL.	8	32	1098	2925	50.22	4.13	22-23	AUG.	0.0	0.0	81	82	59	72	06	1.7	8.5	35	26	FEB.	6.3	80	129	156	131	0	66	16	53	0	1	0

† DATA CORRECTED AFTER PUBLICATION OF THE MONTHLY ISSUE.

NORMALS, MEANS, AND EXTREMES

Month	Temperature						Normal heating degree days (Base 65°)	Precipitation						Relative humidity			Wind &				Mean number of days																		
	Normal			Extremes				Total	Maximum monthly	Year	Minimum monthly	Year	Maximum in 24 hrs.	Year	Mean total	Maximum monthly	Year	Maximum in 24 hrs.	Year	Hour	Hour	Hour	Hour	Hour	Hour	Sunrise to sunset	Sunrise to sunset	Hour	Hour	Hour	Hour	Precipitation	Sunrise to sunset	Mean number of days					
	Daily maximum	Daily minimum	Monthly	Record highest	Record lowest	Year		Normal total	Year	Year	Year	Year	Year	Year	Mean total	Maximum monthly	Year	Maximum in 24 hrs.	Year	Hour	Hour	Hour	Hour	Hour	Hour	Mean sky cover sunrise to sunset	Precipitation sunrise to sunset	Sunrise to sunset	Sunrise to sunset	Hour	Hour	Temperatures Max. Min.							
(a)	(b)	(b)	(b)	26	26	(b)	(b)	26	26	26	26	26	26	26	20	26	26	26	26	25	25	25	25	24	18	21	21	21	26	26	26	26	25	25					
J	69.6	48.7	59.2	85	1957+	24	1966+	248	1.96	5.29	1964	0.15	1950	2.21	1945	0.0	0.0	1951	T	1951	87	89	60	79	9.3	NW	40	27	1959	5.6	10	9	12	7	0	1	6		
F	70.9	50.2	60.6	88	1962+	24	1958	190	2.75	9.13	1960	0.29	1944	3.57	1960	T	T	1951	85	88	56	74	10.2	NNW	40	20	1960	5.7	9	8	11	8	0	0	2				
M	74.2	53.4	62.8	90	1954+	31	1968+	140	3.56	7.75	1953	0.25	1956	5.74	1953	0.0	0.0	1956	85	87	56	72	10.4	SSW	44	22	1957	5.7	9	10	12	11	8	0	2				
A	78.8	59.0	68.9	96	1968	35	1950	15	2.97	7.12	1949	1	1967	4.00	1949	0.0	0.0	1950	85	86	55	71	10.4	E	44	22	1953	5.3	10	11	9	8	0	2					
M	83.5	64.9	74.2	100	1953	46	1945	0	2.85	6.82	1963	0.08	1965	4.22	1947	0.0	0.0	1955	87	84	57	72	9.4	E	40	23	1951	5.3	10	11	9	8	0	2					
J	86.9	69.9	78.4	102	1944	57	1961+	0	5.81	15.19	1966	1.35	1952	6.28	1966	0.0	0.0	1966	90	88	64	77	8.5	SW	40	26	1965	6.3	10	12	12	12	0	2					
JUL	88.2	72.0	80.1	99	1952	65	1965+	0	6.74	14.58	1954	1.25	1952	3.90	1967	0.0	0.0	1967	91	89	66	80	7.6	SSW	40	25	1963	6.4	4	14	13	14	0	2					
AS	88.3	73.1	80.7	99	1956	65	1957+	0	6.27	19.89	1953	2.01	1963	4.41	1949	0.0	0.0	1963	92	91	66	82	7.6	E	50	11	1949	6.4	4	15	14	16	0	2					
S	86.2	72.2	79.2	99	1964	52	1956	0	7.00	14.02	1951	1.88	1954	6.34	1964	0.0	0.0	1964	89	90	68	82	9.2	SW	44	22	1960	6.7	4	13	13	14	0	2					
O	81.2	65.6	73.4	95	1959	41	1954	0	5.61	13.00	1950	0.09	1967	9.29	1953	0.0	0.0	1967	86	88	64	79	9.7	NE	58	11	1950	5.8	10	12	11	11	0	2					
N	74.6	56.1	65.3	89	1968	27	1950	75	2.33	7.98	1963	7	1967	4.62	1963	0.0	0.0	1963	87	88	60	79	9.1	NE	37	27	1963	5.0	10	11	9	7	0	2					
D	70.1	50.4	60.3	85	1947+	21	1962	211	1.95	5.03	1969	0.06	1956	4.01	1969	T	T	1962	87	88	61	80	9.0	NW	40	34	1954	5.7	9	10	12	7	0	1					
YR	79.4	61.3	70.3	102	1944	21	1962	879	49.90	19.89	1953	T	1967+	9.29	1953	T	T	1962	87	88	61	77	9.2	E	58	11	1960	5.8	94	135	136	115	0	81	32	55	0	5	0
JUN. DEC.																																							

Means and extremes above are from existing and comparable exposures. Annual extremes have been exceeded at other sites in the locality as follows:

Lowest temperature 18 in January 1940; maximum monthly precipitation 24.82 in October 1924; maximum precipitation in 24 hours 12.85 in October 1924.

- (a) Length of record, years, based on January data. Other months may be for more or fewer years if there have been breaks in the record.
 (b) Climatological standard normals (1931-1960). Less than one half.
 (c) All data for all months, or years.
 (T) Trace, an amount too small to measure.
 Below zero temperatures are preceded by a minus sign.
 The prevailing direction for wind in the Normals, Means, and Extremes table is from records through 1963.
 § ≥ 70° at Alaskan stations.

Solar radiation data are the averages of direct and diffuse radiation on a horizontal surface. The langleyone gram calorie per square centimeter.

& Figures instead of letters in a direction column indicate direction in tens of degrees from true North; i.e., 09°-East, 18°-South, 27°-West, 36°-North, and 00°-Calm. Resultant wind is the vector sum of wind directions and speeds divided by the number of observations. If figures appear in the direction column under "Fasted mile" the corresponding speeds are fastest observed 1-minute values.

STATION LOCATION

DAYTONA BEACH, FLORIDA

Location	Occupied from	Occupied to	Ailine distance and direction from previous location.	Latitude North	Longitude West	Ground at temp- erature site	Elevation above Ground						Sea level	Remarks
							Wind instruments	Extreme thermometers	Psychrometer	Telepsychrometer	Tipping bucket rain gage	Weighing rain gage	8" rain gage	
COOPERATIVE														
514 Main Street (On Peninsula about 400 ft. from ocean)	1-29-23	1-29-29		29° 13'	81° 00'	10		5				4		W. E. French, Cooperative observer.
327 S. Palmetto Street (about mid peninsula)	1-29-29	Late 1931	About 800 feet W	29° 13'	81° 00'	10		5				4		W. E. French, Cooperative observer.
127 S. Oleander Street	Late 1931	Jan. 1933	Same	29° 13'	81° 00'	10		5				4		W. E. French, Cooperative observer. Poor Exposure found in January 1935. Duration unknown.
AIRPORT STATION														
East side of present Municipal Airport	Jan. 1935	Mar. 1943	3.8 mi. SW	29° 11'	81° 03'	33						4		Airways observer through Sept. 1935 then CAA.
3rd Floor main hangar Municipal Airport	Mar. 1943	11-15-47	2500 ft. W	29° 11'	81° 03'	31	52	32	32		31	30		WRAS established 2-13-44.
Building #18 Municipal Airport	11-15-47	12- 8-52	400 ft. W	29° 11'	81° 03'	30	84	5	5		4	4		
Municipal Airport Administration Building Second Floor	12- 8-52	3-28-59	400 ft. E	29° 11'	81° 03'	31	64	5	5		5	4		
Municipal Airport New Tower Building First Floor	3-28-59	Present	50 ft. SE	29° 11'	81° 03	31	23	5	5	a4	b4	4	# 5	# Commissioned 467 ft. ESE of instrument shelter 9-1-59. a - Decommissioned in 1960. b - 5 ft. to 5-13-65.

Requests for additional information should be directed to the Weather Bureau Office for which this summary was issued.

Sale Price: 15 cents per copy. Checks and money orders should be made payable to the Superintendent of Documents. Remittances and correspondence regarding this publication should be sent to the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402

USCOMM-ESSA-ASHEVILLE - 800